

REMARKS

This Reply is in response to the Office Action mailed on October 6, 2004 in which Claims 11, 15 and 38 were objected to and in which Claims 1-10, 12-14, 16-37 and 39 were rejected. With this Reply, Claim 33 is cancelled; Claims 1, 2, 7, 10, 14, 18, 24, 31 and 33 are amended; and Claims 40-43 are added. Claims 1-37 and 39-43 are presented for reconsideration and allowance.

I. Rejection of Claims 1-17 Under 35 U.S.C. § 112, Second Paragraph.

Paragraph 2 of the Office Action objected to Claims 1-17 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. In particular, the Office Action asserted that it appears that Claim 1 should reflect that the link is coupled to the first printed circuit assembly to be consistent with the dependent claims. In response, Claim 1 is amended to recite that the link is coupled to the first printed circuit assembly. Accordingly, Claims 1-17, as amended, overcome the rejection under 35 U.S.C. § 112, second paragraph.

II. Rejection of Claims 1-3, 6-7, 9-10, 12, 14, 16-18, 20-22, 24-28, 30-37 and 39 Under 35 U.S.C. § 102(b) Based Upon Roy.

Paragraph 4 of the Office Action rejected Claims 1-3, 6-7, 9-10, 12, 14, 16-18, 20-22, 24-28, 30-37 and 39 under 35 U.S.C. § 102(b) as being anticipated by Roy, U.S. Patent No. 6,147,872. With this response, Claims 1, 7, 10, 14, 18, 24 and 31 are amended and Claim 33 is cancelled. Claims 1-3, 6-7, 9-10, 12, 14, 16-18, 20-22, 24-28, 30-32, 34-37 and 39, as amended, overcome the rejection under 35 U.S.C. § 102(b) based upon Roy.

A. Claim 1.

Claim 1, as amended, recites an electronic system which includes a pivoting member pivotally coupled to the chassis about a first axis. The electronic system further includes a link coupled to the first printed circuit assembly and pivotally coupled to the pivoting member about a second axis parallel to the first axis.

Roy fails to disclose an electronic system having a pivoting member pivotally coupled to a chassis and a link coupled to a first printed circuit assembly and pivotally coupled to the pivoting member about a second axis parallel to the first axis. The Office Action characterizes lever arm 54 of Roy as a pivoting member. However, lever arm 54 of Roy is not coupled to housing 10 (characterized by the Office Action as the chassis) of Roy. In contrast, lever arm 54 is pivotally connected to the printed circuit assembly 14 of Roy. Thus, Claim 1, as amended, overcomes the rejection based upon Roy. Claims 2-3, 6-7, 9-10, 12, 14, and 16-17 depend from Claim 1 and overcome the rejection for the same reasons.

B. Claim 2.

Claim 2, as amended, depends from Claim 1 and further recites at least one guide member extending perpendicular to the first printed circuit assembly in slidable engagement with the first printed circuit assembly. Roy fails to disclose at least one guide member extending perpendicular to the first printed circuit assembly and in slidable engagement with the first printed circuit assembly. Neither card guide 18 (characterized as the guide member with respect to Claim 2 by the Office Action) nor screw 92 (characterized as the guide member with respect to Claim 3 by the Office Action) extend perpendicular to printed circuit assembly 14. In contrast, both members extend parallel to printed circuit board 14 of Roy. Thus, Claim 2, as amended, overcomes the rejection for this additional reason.

C. Claim 7.

Claim 7, as amended, depends from Claim 1 and further recites that the second connector extends from a first face of the first printed circuit assembly and the link extends from a second face of the first printed circuit assembly opposite the second connector. Roy fails to disclose a connector which extends from a first face of printed circuit 14 and a link which extends from a second face of printed circuit 14 opposite the connector. Accordingly, Claim 7, as amended, overcomes the rejection based upon Roy for this additional reason.

D. Claim 10.

Claim 10, as amended, depends from Claim 1 and recites that the system component includes a second printed circuit assembly having the second connector. Claim 10 further recites that the first printed circuit assembly and the second printed circuit assembly are configured to face one another while being moved in a direction non-parallel to one another as the second connector is moved into connection with the first connector.

Roy fails to disclose a first printed circuit assembly and a second printed circuit assembly which face one another while being moved in a direction non-parallel to one another as their connectors are moved into connection with one another. In contrast, circuit board 14 of Roy does not face mother board 12 as connectors 22 and 24 are being connected. Accordingly, Claim 10, as amended, overcomes the rejection based upon Roy for this additional reason.

E. Claim 14.

Claim 14, as amended, depends from Claim 1 and further recites a spring coupled between the first printed circuit assembly and the chassis and configured to apply force to the first printed circuit assembly in a direction non-parallel to the first printed circuit assembly. Roy fails to disclose a spring configured to apply force to circuit board 14 in a direction non-parallel to circuit board 14. In contrast, spring 98 applies force in a direction parallel to circuit board 14. Accordingly, Claim 14, as amended, overcomes the rejection based upon Roy for this additional reason.

F. Claim 18.

Independent Claim 18, as amended, recites an electronic subsystem for use with an electronic system having a pivoting member pivotally coupled to the chassis for pivotal movement about an axis. The electronic subsystem includes a link coupled to the first printed circuit assembly and adapted to be slidably coupled to the pivoting member such that the link pivots and slides relative to the pivoting member as the pivoting member is pivoted to move the second connector between a

connected state in which the second connector is connected to the first connector and the first printed circuit assembly is parallel to the axis and a disconnected state.

Roy fails to disclose an electronic subsystem having a pivoting member pivotally coupled to the chassis for pivotal movement about an axis and a link coupled to a first printed circuit assembly and adapted to be coupled to the pivoting member such as that the link pivots and slides relative to the pivoting member as the pivoting member is pivoted to move the second connector to a connected state in which the second connector is connected to the first connector and the first printed circuit assembly is parallel to the axis. As noted above, Roy fails to disclose a pivoting member pivotally coupled to a chassis.

Moreover, Roy fails to disclose an electronic subsystem having a link which pivots and slides relative to a pivoting member to move a connector of the first printed circuit assembly to a connected state in which the connector is connected to the first connector of the system component and in which the first printed circuit assembly is parallel to the axis about which the pivoting member pivots. In contrast, when connector 24 of circuit board 14 is connected to connector 22, circuit board 14 does not extend parallel to the axis about the axis 62g about which lever arm 54 pivots. Accordingly, Claim 18, as amended, overcomes the rejection based upon Roy. Claims 20-22 depend from Claim 18 and overcome the rejection for the same reasons.

G. Claim 24.

Claim 24, as amended, recites an electronic system for use with an electronic subsystem having a first printed circuit assembly with a first connector and a link extending from the first printed circuit assembly. The electronic system includes a system component having a second connector and a pivoting member pivotally coupled to the chassis about an axis. The pivoting member is configured to slidably engage the link during pivoting to move the first connector and the second connector between a connected state in which the first printed circuit assembly is parallel to the axis about which the pivoting member pivots in a disconnected state.

Roy fails to disclose an electronic system having a pivoting member pivotally coupled to the chassis about an axis and a link configured such that pivoting of the pivoting member moves the first connector and the second connector to a connected state in which the first printed circuit assembly is parallel to the axis about which the pivoting member pivots. In contrast, when connector 24 of circuit board 14 is connected to connector 22, circuit board 14 does not extend parallel to the axis about which lever arm 54 (characterized as the pivoting member by the Office Action). Moreover, lever arm 54 is not pivotally coupled to a chassis. Accordingly, Claim 24, as amended, overcomes the rejection based upon Roy. Claims 25-28 and 30 depend from Claim 24 and overcome the rejection based upon Roy for the same reasons.

H. Claim 31.

Claim 31, as amended, recites an electronic system which includes a first system component having a first connector, a pivot member pivotally coupled to a chassis about an axis, a second system component having a printed circuit assembly and a second connector, and a link coupled to the second system component. Pivotal movement of the pivoting member moves the first connector and the second connector to a connected state in which the printed circuit assembly extends parallel to the axis about which the pivot member pivots.

Roy fails to disclose an electronic system wherein pivotal movement of the pivoting member moves the first connector and the second connector to a connected state in which the printed circuit assembly extends parallel to the axis about which the pivot member pivots. In contrast, circuit board 14 extends perpendicular to the axis about which lever arm 54 (characterized by the Office Action as the pivot member) pivots when connectors 22 and 24 are connected. Accordingly, Claim 31, as amended, overcomes the rejection based upon Roy. Claim 32 depends from Claim 31 and overcomes the rejection for the same reasons.

I. Claim 33.

Paragraph 6 of the Office Action indicated that Claim 38 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Claim 38 is cancelled and its limitations are incorporated into independent base Claim 33. Accordingly, Claim 33, as amended, overcomes the rejection based upon Roy and is believed to be in condition for allowance.

II. Rejection of Claims 1-5, 7-8, 10, 12-14, 16-20, 23, 24-27 and 39 Under 35 U.S.C. § 102(b) Based Upon Joo.

Paragraph 5 of the Office Action rejected Claims 1-5, 7-8, 10, 12-14, 16-20, 23, 24-27 and 39 under 35 U.S.C. § 102(b) as being anticipated by Joo, U.S. Patent No. 6,113,402. With this Reply, Claims 1, 2, 7, 10, 14, 18, 24, 31 and 33 are amended. Claims 1-5, 7-8, 10, 12-14, 16-20, 23, 24-27 and 39, as amended, overcome the rejection based upon Joo.

A. Claim 1.

Claim 1, as amended, recites an electronic system which includes a pivoting member pivotally coupled to a chassis and a link coupled to a first printed circuit assembly and pivotally coupled to the pivoting member about a second axis parallel to the first axis.

Joo fails to disclose an electronic system which includes a pivoting member pivotally coupled to a chassis and a link pivotally coupled to the pivoting member about a second axis parallel to the first axis. With respect to Joo, the Office Action characterizes locking part 48 of Joo as a link. However, locking part 48 is not pivotally coupled to locking lever 60 about an axis parallel to the axis about which lever 60 rotates. Accordingly, Claim 1, as amended, overcomes the rejection based upon Joo. Claims 2-5, 7-8, 10, 12-14 and 16-17 depend from Claim 1 and overcome the rejection based upon Joo for the same reasons.

B. Claim 2.

Claim 2, as amended, depends from Claim 1 and recites that the electronic system additionally includes at least one guide member extending perpendicular to the first printed circuit assembly. Joo fails to disclose such a guide member. The Office Action characterized longitudinal body 42 as the claim guide member. However, longitudinal body 42 of Joo does not extend perpendicular to printed circuit board 24. Thus, Claim 2, as amended, overcomes the rejection based upon Joo for this additional reason.

C. Claim 7.

Claim 7, as amended, depends from Claim 1 and recites that the second connector extends from a first face of the first printed circuit assembly and the link extends from a second face of the first printed circuit assembly opposite the connector. Joo fails to disclose a connector which extends from a first face of a printed circuit assembly and a link which extends from a second face of the printed circuit assembly opposite the connector. Accordingly, Claim 7, as amended, overcomes the rejection based upon Joo for this additional reason.

D. Claim 10.

Claim 10, as amended, depends from Claim 1 and recites that the system component comprises a second printed circuit assembly and that the first printed circuit assembly and the second printed circuit assembly are configured to face one another while being moved in a direction non-parallel to one another as the second connector is moved into connection with the first connector. Joo fails to disclose first and second printed circuit assemblies which face one another while being moved in a direction non-parallel to one another as the second connector is moved in connection with the first connector. In contrast, printed circuit board 24 extends perpendicular to the circuit board from which connector 70' extends. Thus, Claim 10, as amended, overcomes the rejection based upon Joo for this additional reason.

E. Claim 14.

Claim 14, as amended, recites a spring coupled between the printed circuit assembly and the chassis. Claim 14 further recites that the spring is configured to apply force to the first printed circuit assembly in a direction non-parallel to the first printed circuit assembly. The Office Action characterized guide means 50 as a spring. However, guide means 50 is not a spring. Moreover, guide means 50 does not apply force in a direction non-parallel to the first printed circuit assembly. Accordingly, Claim 14, as amended, overcomes the rejection based upon Joo for this additional reason.

F. Claim 18.

Claim 18, as amended, recites an electronic subsystem for use with an electronic system having a chassis, a system component coupled to the chassis having a first connector and a pivoting member pivotally coupled to the chassis for pivotal movement about an axis. The electronic subsystem includes a printed circuit assembly having a second connector and a link connected to the printed circuit assembly. The link pivots and slides relative to the pivoting member as the pivoting member is pivoted to move the second connector to a connected state in which the second connector is connected to the first connector and in which the printed circuit assembly is parallel to the axis.

Joo fails to disclose or suggest an electronic subsystem having a printed circuit assembly and a link adapted to pivot and slide relative to a pivoting member of an electronic system to a connected state in which the connector of the printed circuit assembly is connected to the connector of the system component and in which the printed circuit assembly extends parallel to the axis about which the pivoting member pivots. In contrast, printed circuit board 24 of Joo, in the connected state, extends perpendicular to the axis about which lever arm 60 pivots. Thus, Claim 18, as amended, overcomes the rejection based upon Joo. Claims 19-20 and 23 depend from Claim 18 and overcome the rejection for the same reasons.

G. Claim 24.

Claim 24, as amended, recites an electronic system for use with an electronic subsystem having a printed circuit assembly with a first connector and a link extending from the first printed circuit assembly. The electronic system includes a chassis, a system component having a second connector and coupled to the chassis and a pivoting member pivotally coupled to the chassis about an axis. The pivoting member is configured to move the first connector and the second connector to a connected state in which the first printed circuit assembly is parallel to the axis about which the pivoting member pivots.

Joo fails to disclose or suggest an electronic system for use with an electronic subsystem, wherein the electronic system includes a pivoting member pivotally coupled to the chassis about an axis and wherein the pivoting member is configured to move the connector of a first printed circuit assembly and a connector of a system component to a connected state in which the printed circuit assembly is parallel to the axis about which the pivoting member pivots. In contrast, when connector 70 and 70' of Joo are connected, printed circuit board 24 extends perpendicular to, not parallel to, the axis about which lever arm 60 pivots. Accordingly, Claim 24, as amended, overcomes the rejection based upon Joo. Claims 25-30 depend from Claim 24 and overcome the rejection for the same reasons.

H. Claim 23.

Claim 23 depends from Claim 18 and recites that the first printed circuit assembly has a center of mass and that the link is coupled to the first printed circuit assembly at the center of mass. Joo fails to disclose a printed circuit assembly having a center of mass and a link coupled to the printed circuit assembly at the center of mass. With regard to Claim 23, the Office Action states "Please refer to the above rejection." However, Claim 23 is not rejected based upon Roy. Moreover, neither Roy nor Joo disclose a link coupled to the printed circuit assembly at the center of mass of the printed circuit assembly. Accordingly, Applicants respectfully request that the rejection of Claim 23 be withdrawn.

I. Claim 31.

Claim 31, as amended, recites an electronic system including a pivot member pivotally coupled to a chassis about an axis and a link coupled to printed circuit assembly such that pivotal movement of the pivoting member moves connectors of the printed circuit assembly and a system component to a connected state in which the printed circuit assembly extends parallel to the axis about which the pivot member pivots.

Joo fails to disclose or suggest an electronic system having a pivot member pivotally coupled to a chassis about an axis and a link coupled to a printed circuit assembly and the pivoting member, wherein pivotal movement of the pivoting member moves the first connector of the printed circuit assembly and a connector of the system component to a connected state in which the printed circuit assembly extends parallel to the axis about which the pivoting member pivots. In contrast, link connector 70 and 70' of Joo are connected, printed circuit 24 extends perpendicular to the axis about which lever arm 60 pivots. Thus, Claim 31, as amended, overcomes the rejection based upon Joo. Claim 32 depends from Claim 31 and overcomes the rejection for the same reasons.

J. Claim 33.

Paragraph 6 of the Office Action indicated that Claim 38 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With this response, Claim 38 is cancelled and its limitations are incorporated into independent Claim 33. Accordingly, Claim 33, as amended, overcomes the rejection based upon Joo and is believed to be patentably distinct over the prior art of record. Claims 34-37 and 39 depend from Claim 33 and are believed to be patentably distinct over the prior art of record for the same reasons.

III. Added Claims.

With this Reply, Claims 40-43 are added. Claims 40-43 are believed to be patentably distinct over the prior art of record.

A. Claim 40.

Added Claim 40 depends from Claim 1 and is believed to be patentably distinct over the prior art of record for the same reasons discussed above with respect to Claim 1. Added Claim 40 additionally recites that the pivoting member includes an elongate channel and that the link includes a head portion slidably captured within the channel and slidably along at least a portion of a length of the channel. The prior art of record fails to disclose the electronic system of added Claim 40.

B. Claim 41.

Added Claim 41 depends from Claim 40 and further recites that the pivoting member includes a gate movable between a closed position in which the head portion is captured within the channel and an open position in which the head portion may be removed from the channel.

C. Added Claim 42.

Paragraph 6 of the Office Action indicated that Claim 11 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With this response, Claim 11 is rewritten as added Claim 42 and includes all of the limitations of base Claim 1 and intervening Claim 10. Thus, Claim 11 is believed to be patentably distinct over the prior art of record.

D. Added Claim 43.

Paragraph 6 of the Office Action indicated that Claim 15 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With this response, Claim 15 is rewritten as added independent Claim 43 and includes each of the limitations of base Claim 1 and intervening Claim 14. Accordingly, added Claim 43 is believed to be patentably distinct over the prior art of record.

IV. Conclusion.

After amending the claims as set forth above, claims 1-37 and 39-43 are now pending in this application.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

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By Todd A. Rathe

FOLEY & LARDNER LLP
Customer Number: 22879
Telephone: (414) 297-5710
Facsimile: (414) 297-4900

Todd A. Rathe
Attorney for Applicant
Registration No. 38,276